

SEQUENCE LISTING



#8 pfarmer

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TECH CENTER 1500/2000

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<120> CASSAVA VEIN MOSAIC VIRUS PROMOTERS AND USES THEREOF

<130> MYC0011S

<140> 09/202,838

<141> 2000-01-21

<150> PCT/US97/10376

<151> 1997-06-20

<150> 60/020,129

<151> 1996-06-20

<160> 36

<170> PatentIn Ver. 2.1

<210> 1

<211> 392

<212> DNA

<213> Cassava vein mosaic virus

<400> 1

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aagaagaacc aggcgaagaa aagaatcttg aagacgtaag cactgacgac aacaatgaaa 180
agaagaagat aaggtcggtg attgtgaaag agacatagag gacacatgta aggtggaaaa 240
tgtaagggcg gaaagtaacc ttatcacaaa ggaatcttat cccccactac ttatcctttt 300
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<210> 2

<211> 524

<212> DNA

<213> Cassava vein mosaic virus

<400> 2

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atgttcaaaa atgaagaatg tacagatata agatcctata ctgccagaat acgaagaaga 180
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atacgtagaa attgaaaaag aagaaccagg cgaagaaaag aatcttgaag acgtaagcac 240
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 acatgtaagg tggaaaatgt aagggcggaa agtaacctta tcacaaagga atcttatccc 360
 ccactactta tccttttata tttttccgtg tcatttttgc ccttgagttt tcctatataa 420
 ggaaccaagt tcggcatttg tgaaaacaag aaaaaatttg gtgtaagcta ttttctttga 480
 agtactgagg atacaagttc agagaaattt gtaagtttga attc 524

<210> 3

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<212> DNA

<213> Cassava vein mosaic virus

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 atgttcaaaa atgaagaatg tacagataca agatcctata ctgccagaat acgaagaaga 180
 atacgtagaa attgaaaaag aagaaccagg cgaagaaaag aatcttgaag acgtaagcac 240
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 acatgtaagg tggaaaatgt aagggcggaa agtaacctta tcacaaagga atcttatccc 360
 ccactactta tccttttata tttttccgtg tcatttttgc ccttgagttt tcctatataa 420
 ggaaccaagt tcggcatttg tgaaaacaag aaaaaatttg gtgtaagcta ttttctttga 480
 agtactgagg atacaagttc agagaaattt gtaagtttga attc 524

<210> 4

<211> 411

<212> DNA

<213> Cassava vein mosaic virus

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ggatcctatg ttcaaaaatg aagaatgtac agatacaaga tcctatactg ccagaatacg 60
 aagaagaata cgtagaaatt gaaaaagaag aaccaggcga agaaaagaat cttgaagacg 120
 taagcactga cgacaacaat gaaaaagaaga agataaggtc ggtgattgtg aaagagacat 180
 agaggacaca tgtaagggtg aaaatgtaag ggcggaaaagt aaccttatca caaagggaatc 240
 ttatcccca ctacttatcc ttttatattt ttccgtgtca tttttgccct tgagttttcc 300
 tatataagga accaagttcg gcatttgtga aaacaagaaa aaatttggtg taagctatatt 360
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<210> 5

<211> 305

<212> DNA

<213> Cassava vein mosaic virus

<400> 5

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 tgtgaaagag acatagagga cacatgtaag gtggaaaatg taagggcgga aagtaacctt 120

atcacaaagg aatcttatcc cccactactt atccttttat atttttccgt gtcatttttg 180
cccttgagtt ttcctatata aggaaccaag ttcggcattt gtgaaaacaa gaaaaaattt 240
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aattc 305

<210> 6
<211> 261
<212> DNA
<213> Cassava vein mosaic virus

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ggcggaaagt aaccttatca caaaggaatc ttatcccca ctacttatcc ttttatattt 120
ttccgtgtca tttttgccct tgagttttcc tatataagga accaagttcg gcatttgtga 180
aaacaagaaa aaatttggtg taagctatct tctttgaagt actgaggata caagttcaga 240
gaaatttgta agtttgaatt c 261

<210> 7
<211> 193
<212> DNA
<213> Cassava vein mosaic virus

<400> 7
ggatccttat cacaaaggaa tottatcccc cactacttat ccttttatat ttttccgtgt 60
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aaaaatttgg tgtaagctat tttctttgaa gtactgagga tacaagttca gagaaatttg 180
taagtttgaa ttc 193

<210> 8
<211> 143
<212> DNA
<213> Cassava vein mosaic virus

<400> 8
ggatccgtgt catttttgcc cttgagtttt cctatataag gaaccaagtt cggcatttgt 60
gaaaacaaga aaaaatttgg tgtaagctat tttctttgaa gtactgagga tacaagttca 120
gagaaatttg taagtttgaa ttc 143

<210> 9
<211> 420
<212> DNA
<213> Cassava vein mosaic virus

<400> 9

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 ctgaagacgt aagcactgac gacaacaatg aaaagaagaa gataaggctg gtgattgtga 180
 aagagacata gaggacacat gtaagggtga aaatgtaagg gcggaagta accttatcac 240
 aaaggaatct tatccccac tacttatcct tttatatatt tccgtgtcat ttttgcctt 300
 gagttttcct atataaggaa ccaagttcgg catttgtgaa aacaagaaaa aatttgggtg 360
 aagctatatt ctttgaagta ctgaggatac aagttcagag aaatttgtaa gtttgaattc 420

<210> 10

<211> 482

<212> DNA

<213> Cassava vein mosaic virus

<400> 10

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 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa aggatccggt cgggtgattgt 240
 gaaagagaca tagaggacac atgtaagggtg gaaaatgtaa ggcgggaaag taaccttacc 300
 acaaaggaat cttatcccc actacttacc cttttatatt tttccgtgtc atttttgccc 360
 ttgagttttc ctatataagg aaccaagttc ggcatttgtg aaaacaagaa aaaatttgggt 420
 gtaagctatt ttctttgaag tactgaggat acaagttcag agaaatttgt aagtttgaat 480
 tc 482

<210> 11

<211> 458

<212> DNA

<213> Cassava vein mosaic virus

<400> 11

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 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattctga agacgtaagc 240
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 cttatccttt tatatttttc cgtgtcattt ttgcccttga gttttcctat ataaggaacc 360
 aagttcggca tttgtgaaaa caagaaaaaa tttgggtgtaa gctattttct ttgaagtact 420
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<210> 12

<211> 468

<212> DNA

<213> Cassava vein mosaic virus

<400> 12

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tctagaccag aaggtaatta tccaagatgt agcatcaaga atccaatggt tacgggaaaa 60
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gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattctga agacgtaagc 240
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ataaggaacc aagttcggca tttgtgaaaa caagaaaaaa tttggtgtaa gctattttct 420
ttgaagtact gaggatacaa gttcagagaa atttgtaagt ttgaattc 468

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<210> 13

<211> 491

<212> DNA

<213> Cassava vein mosaic virus

<400> 13

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ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattctga agacgtaagc 240
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aaatttggtg taagctattt tctttgaagt actgaggata caagttcaga gaaatttgta 480
agtttgaatt c 491

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<210> 14

<211> 408

<212> DNA

<213> Cassava vein mosaic virus

<400> 14

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ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattctga agacgtaagc 240
actgacgaca acaatgaaaa gaagaggatc cgtgtcattt ttgcccttga gttttcctat 300
ataaggaacc aagttcggca tttgtgaaaa caagaaaaaa tttggtgtaa gctattttct 360
ttgaagtact gaggatacaa gttcagagaa atttgtaagt ttgaattc 408

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<210> 15

<211> 418

<212> DNA

<213> Cassava vein mosaic virus

<400> 15

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 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattctga agacgtaagc 240
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 gttttcctat ataaggaacc aagttcggca tttgtgaaaa caagaaaaaa tttggtgtaa 360
 gctattttct ttgaagtact gaggatacaa gttcagagaa atttgaagt ttgaattc 418

<210> 16

<211> 441

<212> DNA

<213> Cassava vein mosaic virus

<400> 16

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 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattctga agacgtaagc 240
 actgacgaca acaatgaaaa gaagaagata aggtcggatc ttgtgaaaga gacatagagg 300
 atccgtgtca tttttgccct tgagttttcc tatataagga accaagttcg gcatttgtga 360
 aaacaagaaa aaatttggtg taagctattt tctttgaagt actgaggata caagttcaga 420
 gaaatttgta agtttgaatt c 441

<210> 17

<211> 476

<212> DNA

<213> Cassava vein mosaic virus

<400> 17

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 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattctga agacgtaagc 240
 actgacgaca acaatgaaaa gaagaagata aggtcggatc ttgtgaaaga gacatagagg 300
 acacatgtaa ggtgaaaaat gtaaggcgg aaaggatccg tgcattttt gcccttgagt 360
 tttcctatat aaggaaccaa gttcggcatt tgtgaaaaca agaaaaaatt tgggtgaagc 420
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<210> 18

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 18
accggtacca gaaggtaatt atccaagatg t 31

<210> 19
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 19
cggaattcaa acttacaaat ttctctgaag 30

<210> 20
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 20
cgcgatccag actgaatgcc cacaggccgt cgag 34

<210> 21
<211> 17
<212> DNA
<213> Cassava vein mosaic virus

<400> 21
agacgtaagc actgacg 17

<210> 22
<211> 22
<212> DNA
<213> Cassava vein mosaic virus

<400> 22
cttatcacia aggaatctta tc 22

<210> 23

<211> 22
<212> DNA
<213> Cassava vein mosaic virus

<400> 23
cttatcacao aggaatctta tc 22

<210> 24
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 24
gctctagacc agaaggtaat tatccaag 28

<210> 25
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 25
tatggatcct atgttcaaaa atgaag 26

<210> 26
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 26
aaaggatcct gaagacgtaa gcactg 26

<210> 27
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 27

agaggatccg gtcggtgatt gtgaa

25

<210> 28

<211> 25

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer

<400> 28

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<210> 29

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 29

tatggatccg tgtcattttt gcccttg

27

<210> 30

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 30

cggaattcaa acttacaaat ttctctaag

29

<210> 31

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 31

taaggatcct ttccgccctt acatt

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<210> 32

<211> 25

<212> DNA

<213> Artificial Sequence

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<210> 33

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 33

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<210> 34

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 34

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<210> 35

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 35

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<210> 36

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 36

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23